UNITED STATES DEPARTMENT OF AGRICULTURE — FOREST SERVICE — SBNF

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Subject: Hazard trees, special use recreation residence, Front Country (Cajon) Ranger District, San Bernardino National Forest (FPM Report No. S97-2)

To: District Ranger, Front Country Ranger District

On September 10, 1997, Laura Merrill, Entomologist, James Allison, Pathologist, and Melinda Benton, District Wildlife Technician, examined hazard trees at special use recreation residence no. 114 in Lytle Creek. The permittee had previously expressed concern about a sycamore tree leaning over the residence and had requested permission to remove it. While examining the tree in question, we noticed others close to the residence which might also pose a safety hazard, and noted other forest health problems which will be discussed below. Based on our examination of the sycamore tree, we recommend that it be removed. In addition, there is a group of three ash trees at the southeast corner of the residence of which the most westerly one may also be pruned or removed, and the most easterly may be pruned.

The recreation residence is located on the north side of a tributary of Lytle Creek, which flows within approximately 6 feet of portions of the back of the structure. In addition to the native sycamore and ash, there is a Coulter pine, a coast redwood, and a giant sequoia close to the residence. On the hillside on the south side of the creek, in addition to the sycamore at issue, there are live oak trees which do not appear to pose a hazard. The targets which could be damaged by falling trees and limbs consist of the recreation residence and a patio area on the south side of the creek.

Sycamore tree: The tree of concern to the permittee measures 21.6 inches dbh (diameter at breast height, 4.5 feet above the ground) and consists of a very long bole growing at a curve in a northerly direction, and a heavy crown which is partially over the recreation residence. We estimate the total height to be 80 - 100 feet. In addition to the very poor architecture of this tree, there are many cracks in the bark, a somewhat abrupt bend and swelling approximately 25-30 feet above the ground, and a dead branch stub in the crown which probably has provided an entry for decay fungi. While we were examining the tree there were light gusts of wind which caused considerable swaying in the crown. There is evidence of boring by the western sycamore borer, Synanthedon resplendens (a clearwinged moth), at the base. However, the infestation is light and probably insignificant with respect to tree vigor. The base of the tree is approximately 30 feet from the residence, but because of the curvature of the trunk, a portion of the crown is directly above the residence. The vertical cracks in the bark are one to several feet long and appear to be stress or movement induced. Other than the dead branch stub in the crown, which by itself is not large enough to cause significant damage if it fell, we saw no evidence of wood rot. The soil at this site is probably fairly deep, but the water table is high

because of the proximity of the creek (the base of the tree is approximately 5 feet above the creek level). There was no evidence of root movement. Our recommendation to remove this tree is based on its extremely poor architecture, including the weight of the crown, and the likelihood of significant property damage and possible injury if the tree were to fail. There did not appear to be any way to prune the tree to mitigate the hazard, and cabling the tree to the slope to the south did not appear feasible, as it would not prevent breakage in the upper bole, and such breakage would result in the top falling on the residence. Lytle Creek is a very windy area, and the coming winter is expected to be unusually wet. Breakage could occur in any part of the bole, or high winds, wet soil, and possible snow loading could cause the tree to be uprooted.

Ash trees: Three large ash trees are growing together on the creek bank at the southeast corner of the residence along with the decayed stump of a fourth tree. The closest tree is 9 feet from the residence. All of the trees had signs of extensive decay, including decayed branch stubs (some from past pruning activities), wounds which had not callused over, and an oak seedling growing from one decayed branch stub. These trees were lightly infected with mistletoe, Phoradendron sp. There were active and inactive (no green shoots) mistletoe galls, including one on tree no. 3 at which breakage could occur and drop a heavy branch on the residence. The trees were numbered from west to east to clarify specific descriptions and recommendations. The trees were not drilled to determine the proportion of sound wood.

Tree no. 1 appeared to be most likely to damage the house, if branches were to break. This tree is 19.3 inches dbh and once had a top which extended over the residence. The top had been pruned off at a height of approximately 25 feet. The pruning wound failed to heal and decay is visible from the ground. The heaviest branch extending over the roof is approximately 8 inches in diameter at the base, which is adjacent to the decaying pruning wound. A skilled tree surgeon may be able to remove this branch, mitigating the hazard for several years. Closer inspection may show that the rot in the upper bole is so extensive that it is safer to remove the tree. Any large pruning wounds on this tree are unlikely to heal, and smaller branches which are not removed may also fall on the residence, although they are less likely to cause significant damage.

Tree no. 2, 19.4 inches dbh, is most likely to fall in the direction of the creek in case of failure. It could fall onto the patio area and would be a hazard to users present at the time. This tree did not have branches overhanging the residence, and despite evidence of rot, appeared to have good architecture (the weight of the crown was centered over the base of the tree).

Tree no. 3, 22.6 inches dbh, also had good architecture, but had branches extending over the residence, which, if sufficiently rotted or if breakage occured at the mistletoe swelling indicated above, could fall and damage the roof. Skilled pruning could mitigate hazards associated with this tree.

Trees 2 and 3 should be monitored for leaning and evidence of root movement (for example, large cracks in the soil) which could preclude failure.

Other forest health problems: There is a large (approximately 28 inches dbh) Coulter pine on the west side of the house which has an old chain around it. The chain should be loosened or removed to prevent damage to the tree. There

are several oaks and ash to the south and southeast of the residence which have English ivy, Hedera helix, growing up the boles. English ivy can shade out the crowns of trees, and should be removed. Ivy plants on the ground may be considered desirable, so that if the permittee chooses not to eradicate the species on the whole site, she should have portions of the plants growing up the trees removed. This will reduce the likelihood of branch dieback and tree death in the affected trees.

If you have any questions about this report, please call Laura Merrill at (909) 884-6634 ext. 3199 or James Allison at the same number, extension 3123.

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